

### 3.17 The Law of Sines (key-odds)

1.  $\gamma = 44^\circ$ ,  $b = 14.4$ ,  $c = 10.5$

3.  $\beta = 26^\circ$ ,  $a = 14.6$ ,  $b = 35.8$

5. no triangle possible

7.  $\gamma = 15.6^\circ$ ,  $\alpha = 26.3^\circ$ ,  $a = 10.3$

9.  $\alpha_1 = 45.1^\circ$ ,  $\gamma_1 = 102.2^\circ$ ,  $c_1 = 51.7$   
 $\alpha_2 = 134.9^\circ$ ,  $\gamma_2 = 12.4^\circ$ ,  $c_2 = 11.4$

11.  $x = 18.4$  miles

13.  $h \approx 161.8$  ft

15. a) 2 b)  $\frac{2\pi}{3}$  c)  $\frac{1}{2}$  d)  $\pi$